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U.S. Application Serial No.: 10/801,416

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Response to Office Action dated November 29, 2006

Amendments to the Claims:

1-4. (Cancelled)

5. (Currently amended) A device for performing non-invasive hyperthermia treatment of a lesion, comprising: a ~~heat~~ radiofrequency energy source for providing localized heat energy for the non-invasive hyperthermia treatment;

~~a controlled temperature source generated from a battery driven PC controlled device;~~

~~a temperature sensor that is part of a feedback loop for continuously monitoring temperature; and~~

an applicator connected to the radiofrequency energy source comprising a ground probe and a temperature sensor connected to a high voltage probe for continuously measuring the difference between a target temperature and a temperature of the lesion; and

a processor for controlling output of the radiofrequency energy source to maintain a target temperature that continuously measures the difference between a target temperature and a temperature of the lesion and determines whether to continue the hyperthermia treatment based on a parameter related to a the measured temperature that is within an allowable range of operation for the device when the target temperature has been provided, continuously evaluates one or more criteria pertaining to a thermal dose being delivered, and terminates a treatment when evaluation of one or more of the criteria indicates treatment of the lesion.

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6. (Currently amended) The device of claim 5 wherein the parameter criteria pertaining to a thermal dose comprises the ~~measured temperature wherein the~~ a preferred temperature profile ~~is controlled by a microprocessor driven temperature control feedback system based on specific algorithms.~~

7. (Currently amended) The device of claim 5 wherein the parameter criteria pertaining to a thermal dose comprises the ~~monitoring of temperature relative to the~~ a preferred temperature profile and ~~the adjustments of the low frequency field output of the radiofrequency energy source to meet the~~ profile.

8-24. (Cancelled)

25. (New) A method of non-invasive hyperthermia treatment of a lesion comprising:

controlling the power output of a radiofrequency energy system to maintain a target temperature;

maintaining the target temperature by continuously measuring the difference between the target temperature and a temperature of the lesion; and

terminating a treatment when evaluation of one or more criteria pertaining to a thermal dose being delivered indicates treatment of the lesion,

wherein the radiofrequency energy system comprises:

a radiofrequency radiating source connected to an applicator comprising a temperature sensor connected to a high-voltage probe which continuously measure the temperature of the lesion and a ground probe; and

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a processor that determines when the target temperature has been provided, continuously evaluates one or more criteria pertaining to a thermal dose being delivered, and terminates a treatment when evaluation of one or more of the criteria indicates treatment of the lesion.